GOVERNMENT OF INDIA
EARTH SCIENCES
LOK SABHA

UNSTARRED QUESTION NO:4415
ANSWERED ON:29.03.2017
Shoreline Mapping
Mahajan Smt. Poonam

Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether the Government deploys shoreline vulnerability mapping technology in the country;

(b) if so, the details thereof including shoreline information of the coastal States, State-wise including Maharashtra and the expenditure incurred to map shorelines in the country during the last three years, year wise;

(c) the details and number of satellites utilised to map shoreline change rates in the country;

(d) whether the shoreline mapping technology measures the effects of global warming in the country; and

(e) if so, the details thereof?

Answer

THE MINISTER OF STATE FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND
MINISTRY OF EARTH SCIENCES
(SHRI Y. S. CHOWDARY)

(a) Yes, Sir. The Indian National Centre for Ocean Information Services (INCOIS) has assessed shoreline change using the satellite data acquired during 1972-2000 in order to calculate the shoreline change rate. Shoreline change rate is one of the input parameters to calculate the coastal vulnerability index along the Indian coast.

(b) This work was carried out during the period 2007-2009 at INCOIS using the satellite data acquired during 1972-2000, State wise shoreline change rate calculated at 1:100000 scale are given below

State Length (km)*
Erosion No change Accretion Total
Gujarat 933 650 573 2156
Maharashtra 309 518 114 941
Goa 43 131 19 193
Karnataka 67 229 39 334

Kerala 205 322 93 621
Tamil Nadu 286 489 159 934
Andhra Pradesh 185 473 430 1087
Orissa 153 220 125 498
West Bengal
863 750 314 1927
Lakshadweep 30 98 24 152
Andaman 366 1573 511 2449
Nicobar 286 200 317 803
*Length of coastline including the creeks, bays, deltas and estuary

Satellite data were taken from open source Landsat of USA and Indian Remote Sensing (IRS) satellite of India data available at INCOIS from other projects were used; hence no expenditure was incurred towards data specific to this work.

(c) Data from the satellites - Landsat: MSS; TM; ETM decadal data sets (1972, 1990, 2000) and IRS:1C/D; Resources at data were used for this study.

(d) and (e)This study did not estimate specific impact due to climate change.